Appendix A Terms Used In this Handbook

Appendix Overview

This appendix contains two types of information:

- A list of acronyms used in the United States Customs Service automated environment
- A glossary of terms used in this handbook

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Section A Acronyms

Introduction	This section contains the definitions of the various acronyms as used by the United States Customs Service.
	The acronyms are listed alphabetically.
AA	Approval Authorities
ABEND	Abnormal Ending (abnormal program termination)
AC	Assistant Commissioner
ADD	Applications Development Division
AIS	Automated Information System
AISSD	Automated Information Systems Security Division
ANSI	American National Standards Institute
API	Advanced Passenger Information
APR	Acceptance Problem Report
ATD	Applied Technology Division
BAA	Business Area Analysis
BDL	Baseline Documents List
BPI	Business Process Improvement

BSD	Business Systems Design
CAD/CAM	Computer Assisted Design/Computer Assisted Modeling
CAL	Configured Articles List
CASE	Computer-aided Software Engineering
СВА	Cost/Benefit Analysis
СВТ	Computer-based Training
ССВ	(1) Change Control Board(2) Configuration Control Board
CDD	Corporate Data Dictionary
CDR	Critical Design Review
CI	Configuration Item
CICS	Customer Information Control System
CIS	Customs Issuance System
CM	Configuration Management
CMM	Capability Maturity Model
COBRA	Consolidated Omnibus Budget Reconciliation Act

COTS	Commercial Off-the-Shelf
CR	Change Request
CSA	Computer Security Act
CRF	Change Request Form
CRUD	 (1) Create/Revise/Update/Delete (2) Create/Read/Update/Delete (levels of security access)
CSCI	Computer Software Configuration Items
CSU	Computer Software Unit
CWBS	Contract Work Breakdown Structure
DAA	Designated Approval Authority
DAC	Discretionary Access Control
DASD	Direct Access Storage Device
DBA	Database Administration/Administrator
DBMS	Database Management System
DDL	Data Definition Language
DES	Data Encryption Standard

DFD	Data Flow Diagram
DM	Data Management
DSD	Data Structure Diagram
DSO	Designated Security Officer
DST	Decision Support Team
EDI	Electronic Data Interchange
FCA	Functional Configuration Audit
FIPS	Federal Information Publication Standard
FIRMR	Federal Information Resources Management Regulations
FMFIA	Federal Managers Financial Integrity Act
FOIA	Freedom of Information Act
FRC	Federal Records Center
FRD	Functional Requirements Document
FSD	Financial Systems Division, Office of Finance
FTE	Full-time Equivalent

GAO	Government Accounting Office
GD	Generation DBMS
GL	Generation Language
GOSIP	Government Open Systems Interconnection Profile
GOTS	Government Off-the-Shelf
GSA	General Services Administration
GUI	Graphical User Interface
НВ	Handbook
I&A	[User] Identification and Authentication
I/O	Input/Output
IE	Information Engineering
IG	Inspector General, Treasury
IMP	Investment Management Process
INS	Immigration and Naturalization Service

IRB	Investment Review Board
IRM	Information Resources Management
ISLC	Information Systems Life Cycle
ISP	Information Strategy Plan/Planning
ISSO	Information Systems Security Officer
IT	Information Technology
ITFRW	IT Funding Request Worksheet
IV&V	Independent Verification and Validation
JAD	Joint Application Development
JCL	Job Control Language
JES2	Job Entry System
KPA	Key Process Area
LAN	Local Area Network
LOE	Level of Effort
MAC	Mandatory Access Control

MNS	Mission Needs Statement
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
MQM	Multiple Queue Manager
MS	(1) Management Systems(2) Microsoft (as in MS Project)
MVS	Multiple Version Systems
NCAP	National Customs Automation Program
NCSC	National Computer Security Center
NDC	Newington Data Center
NIST	National Institute of Standards and Technology
NSM	Network Systems Management
NTIS	National Technical Information Service
NTEU	National Treasury Employees Union
OIT	Office of Information and Technology

OJT	On-the-Job Training
OLAP	On-line Analytical Processing
OMB	Office of Management and Budget
00	Object-Oriented
OPM	Office of Personnel Management
OPR	Operational Problem Report
OPS	Systems Operations Division
PA	Privacy Act
PAA	Principal Accrediting Authority
PAT	Process Action Team
PCA	Physical Configuration Audit
PDS	Personal Data Set
PM	Project Manager
PMS	Program Management Staff
PO	Business Sponsors/Process Owners
	.

PRA	Paperwork Reduction Act
PTO	Project Tracking and Oversight
QA	Quality Assurance
QAT	Quality Assurance Testing
RAD	Rapid Application Development
RAP	Requirements Analysis Package
RBAC	Role-based Access Control
RCS	Report Control Symbol
RFP	Request for Proposal
ROM	Read-only Memory
SAT	Systems Acceptance Testing
SBU	Sensitive But Unclassified
SDLC	Systems Development Life Cycle
SDP	Software Development Plan
SEACATS	Seized Assets and Case Tracking System

SEI	Software Engineering Institute of Carnegie Mellon University
SEPG	Software Engineering Process Group
SFUG	Security Features User's Guide
SIMS	System Information and Management System
so	Systems Operations
SOD	Systems Operations Division
SPIR	SDLC and Process Improvement Recommendation
SQL	Structured Query Language
STARS	Software Tracking and Reporting System
STP	Systems Test Plan
TAG	Technical Architecture Group
тсв	Trusted Computing Base
TD	 (1) Treasury Directive (2) Training/Documentation Team
TECS	Treasury Enforcement Communications System
TFM	Trusted Facility Manual

TPR	Test Problem Report
TRAEN	Training Records and Enrollment System
TRB	Technical Review Board
URD	User Requirements Document
WAN	Wide Area Network
WBS	Work Breakdown Structure
WRAPS	Work Request Automated Paperless System
Y2K	Year 2000

Section B Glossary

Introduction

This section contains the definitions of various software engineering terms, as used by the United States Customs Service.

Each term is listed in alphabetical order and includes the following information:

- The definition(s)
- An example (if appropriate)

Acceptance Testing

Definition: Testing designed to detect any discrepancies between the business/functional requirements and the new or modified software.

- Acceptance testing is done after all developer system and integration testing is done.
- Acceptance testing proves that the software meets or fails to meet the requirements

NOTE: Acceptance testing is **not** part of the debugging process.

Accreditation

Definition: The official management authorization for operation of an AIS. It provides a formal declaration by an Accrediting Authority that a computer system is approved to operate in a particular security mode using a prescribed set of safeguards.

Accreditation Statement

Definition: A policy statement verifying that a computer system and the processing area have met all requirements necessary to process sensitive data in a secure environment.

NOTE: Accreditation is performed during the Implementation or Transition phase of the life cycle.

Action Item

Definition: A task or issue assigned to an individual to research or resolve by a specific date. One high-level issue may cause the generation of a group of Action Items.

AIS Security Analyst

Role Definition: The AIS Security Analyst provides the project with expertise in computer security, communications security, emissions security, and/or network security.

Allocated Resources

Definition: Allocated requirements are the subset of the system requirements that are to be implemented in the software components of the system.

The allocated requirements are a primary input to the software development plan.

Software requirements analysis elaborates and refines the allocated requirements and results in software requirements which are documented.

Analyst

Role Definition: The Analyst is a person who performs analysis on any aspect of the system. The Analyst develops the initial Functional Requirements, and supports development of the Cost/Benefits Analysis, Project Plan, Release Plan (if the project is using an Incremental Life Cycle), and the Implementation or Deployment Plan.

Later in the project, an analyst may also perform project metrics analysis and impact analyses for requirements changes and project risks.

Application

Definition: A software grouping of related functions, or a series of interdependent or closely related programs, that when executed accomplish a specified objective or set of user requirements.

Application Security

Definition: The set of controls that makes/**ensures** an information system perform/**s** in an accurate and reliable manner, only those functions it was designed to perform. The set of controls includes:

Programming

Processing

Access

Storage

Source Document

Output

• Input Data

Audit Trail

Attribute

Definition: A data element which describes an object or relationship.

Example: Customer Name, Order Number, Product Color

Audit

Definition: An independent examination of a work product or set of work products to verify accuracy and assess compliance with specifications, standards, contractual agreements, or other criteria.

Audit Trail

Definition: A chronological record of system activities that is sufficient to enable the reconstruction, review, and examination of the sequence of environments and activities surrounding or leading to an operation, a procedure, or an event in a transaction from its inception to final results.

Automated Information System (AIS)

Definition: An assembly of computer hardware, software, and/or firmware configured to collect, create, communicate, compute, disseminate, process, store, and/or control data or information.

Baseline

Definition: A specification or product that has been formally reviewed and agreed upon, which thereafter serves as the basis for further development.

Changes to a baseline can be done only through **formal** change control procedures.

Business Activities

Definition: During Information Strategy Planning, business activities may be described as a business function and a business process.

Business Data

IE Definition: During Information Strategy Planning, business data may be described as the:

- Subject Area
- Entity Type
- Relationship

Business Function

Definition: A business function (often referred to simply as a function) is a group of business activities that together completely support one aspect of the enterprise. Each function describes something the enterprise does, independent of the structure of the organization.

Functions are higher-level business activities.

The group of activities that comprise a function are generally related because they use similar business data.

Business Interface Representative

Role Definition: The Business Interface Representative is responsible for managing the long-term relationship between OIT and the major business process areas within Customs. This person's responsibilities include:

- Being the strategic communications link to help optimize IT in the Processes
- Acting as the single point-of-contact for the Process Owners
- Coordinating the project initiation phase activities of the IMP
- Assisting with internal marketing and awareness building

Business Interface Representative (continued)

- Supporting the development of the User Requirements for a project
- Coordinating with the Business Sponsors/Process Owners during business process re-engineering efforts

Model

Business Object Oriented Definition: A model which describes the static structure of the objects in the business environment and the relationship(s) among the objects

Business Process

Definition: A business process (frequently referred to simply as a process) is a defined business activity whose executions may be identified in terms of the input and output of entities of specific types that are of value to the customer.

Processes are lower-level business activities.

A process can be distinguished from a function because it is generally characterized by a verb and a noun.

Examples: Take an order; build a steering wheel; call a customer.

Business Sponsor

Role Definition: The Business Sponsor is a representative from the business organization ultimately responsible for a project. This person is the National Process Owner or Organization Head who:

- Organizes a Project Initiation Team
- Provides funding resources to perform the project initiation tasks
- Selects someone who is responsible for entering and maintaining all project information in the IT Project Tracking System
- Prepares an initial draft of User Requirements with the users and prepares the concept portion of the IT Funding Request Worksheet (ITFRW)

Business Sponsor(continued)

- Approves and submits the project's ITFRW to the IRB's Decision Support Team for scoring
- Is ultimately responsible for approving the project Requirements Baseline and accepting the work products produced

C2

Definition: A class of systems labeled "Controlled Access Protection" which provide discretionary access control mechanisms that make users individually accountable for their actions through log-in procedures, auditing of security-relevant events, and resource isolation.

Capability Maturity Model (CMM)

Definition: An application of the process management concepts of Total Quality Management (TQM) to software. The CMM provides a conceptual structure for improving the management and development of software products in a disciplined and consistent way.

CASE Tools

Definition: An integrated set of software tools and automated programs that simplify application development, improve system quality, and enhance productivity

Catastrophic Impact

Definition: The potential cost or result of a risk that will stop project completely, delay start of an activity for several months, or severely increase the project cost.

Certification

Definition: The comprehensive evaluation of the technical and non-technical security features of an application system and other safeguards, to establish the extent to which a particular AIS meets a set of specified security requirements and in support of the accreditation process.

Certification Statement

Definition: A formal statement by the Assistant Commissioner, Office of Information and Technology and the Process Owner stating that a specific application or facility has met all requirements necessary to provide data integrity, availability, and confidentiality.

NOTE: The certification is made prior to Implementation or Transition.

Change Management

Definition: Change Management is the process used to evaluate and make decisions about changes that impact technical or operational baselines or approved schedules and cost plans.

Class

Object-Oriented Definition: A grouping of objects with similar properties, common behavior, common relationships to other objects and common semantics.

Commercial Off-the-Shelf (COTS)

Definition: Software products developed by commercial, for-profit organizations and that are offered for sale in the general market place.

Compound Risks

Definition: Compound Risks are risks which are made worse by interactions with other risks or conditions on the project.

Examples:

- Meeting vague user requirements or using untried hardware with an ambitious schedule
- Pushing technology knowledge with key staff shortages or on more than one front
- Dealing with unstable interfaces with an untried subcontractor.

Conceptual Data Model

Definition: A conceptual data model shows the kinds of data to be stored and the relationship among these data groups.

Configuration Item

Definition: Selected components/work products (e.g., hardware, software, tests, and documentation) that are placed under configuration management and treated as a single entity.

Configuration Management (CM)

Definition: Configuration Management is a discipline applying technical and administrative direction and surveillance to:

- Identify the configuration at given points in time
- Systematically control changes to the configuration
- Maintain integrity and traceability of the configuration throughout the system life cycle

Configuration Management Plan

Definition: A plan for identifying, documenting, and controlling changes to system components.

Configuration Manager

Role Definition: The Configuration Manager is responsible for ensuring that:

- The correct procedures have been followed in creating the system
- The appropriate version of each individual component has been selected
- Any required tests have been performed
- The system represents a complete and consistent whole
- All known problems pertinent to the system have been properly considered

Contingency Plan

Definition: The documented, organized process for implementing emergency responses, back-up operation and post-disaster recovery that will ensure the availability of critical AIS resources and facilitate the continuity of AIS operations in an emergency.

Note: Manual back-up procedures are no longer a viable option.

Control

Definition: Control produces management decisions (i.e., replan, close the risk, invoke a contingency plan, or continue tracking and executing the current plan) which are then implemented by project personnel.

The person who has accountability for a risk should make the control decision for that risk.

Control Conditions

Object-Oriented Definition: A statement which identifies under what conditions an operation is permitted to begin.

Conversion

Definition: Modification of existing software and/or data to enable it to operate with similar functional capability in a different environment.

Example: Data used in a mainframe environment may be modified (or converted) to run on a client/server platform.

Conversion **Testing**

Definition: Ensures that the conversion process was performed correctly, i.e., that all data files, etc. are correctly represented according to the conversion specifications.

Corporate Data Dictionary

Definition: Customs Corporate Data Dictionary is the approved, standard repository for all metadata available to users of Customs automated systems. The Corporate Data Dictionary is maintained by the Data Administration Branch.

Corrective Actions

Definition: Corrective actions are changes made to a plan when the plan is not being achieved, either by adjusting performance or by adjusting the plan. This may be accomplished by the creation of a 'get well plan', definition of alternative plans, reallocation of resources, and/or development of risk mitigation plans.

Corrective Actions (continued)

Examples:

- Extending the schedule to maintain quality
- Adding or reallocating resources to stay on schedule
- Deleting functional capabilities to control costs
- Changing the process to improve performance

Cost/Benefit Analysis

Definition: A study that projects the costs and benefits of an information system.

Costs include all resources required for development as well as operating the system.

Benefits are tangible and intangible.

Critical Impact

The potential cot or result of a risk that has significant impact, but other activities can continue in parallel while this risk is addressed.

Customer

Definition: A customer is the direct recipient of the project's work products. A work product's "customer" can be either internal to the project team or external to the team.

Example of an Internal Customer: A design is reviewed by all project team members and then turned over to the developers. In this case, the developers are the customer.

Example of an External Customer: Requirements are reviewed by all participants and then turned over to the user/business sponsor for approval before being turned over to the designers. In this case, the user/business sponsor is the customer.

Customization

Definition: Altering the source code of an off-the-shelf product in order to meet one or more of Customs requirements. Customization may be done by either:

- The vendor
- Customs or contractor personnel

If a product is customized, it may not be upwardly or downwardly compatible with other releases of the same product unless the vendor propagates the change throughout the product line. Also the customization process may need to be repeated with each new release.

Also see "Tailoring".

Data Administration

Definitions:

- (1) The management function responsible for the planning, definition, organization, protection and efficiency of data in databases within an organization.
- (2) The analysis, classification, and maintenance of an organization's data and data relationships.
- (3) The development of data models and data dictionaries, which combined with transaction volume, are the raw materials for database design.

Data Administration Liaison

Role Definition: A specific System Development Team member assigned responsibility for ensuring that clear, concise, and accurate information is supplied to the Data Administration and Database Management Teams. On large projects, this may be a full time position; while on smaller projects, the liaison would probably not be dedicated full time to this function.

Data Availability

Definition: The level of acceptability for delays in the ability to retrieve needed data.

Data Dictionary See "Corporate Data Dictionary".

Data Element

Definition: A primitive grouping of data. One that cannot be further decomposed.

Data Entity

Definition: A data entity is anything about which information can be stored.

Example: A person, concept, physical object or event.

Data Flow

Definition: A path which carries packets of information of known composition.

Data Flow Diagram

Definition: A graphic representation of related functions, showing all data interfaces between components. It is represented in the form of a network diagram containing four basic components:

- Data Flow: Data in motion
- Process: Transforms Data
- Data Store: Represents a logical file
- Terminator: Shows the origin (source) and recipient (sink) of data used and produced by the system

Data Integrity

Definition: The extent to which the data must be protected from unauthorized or unplanned modification. This a largely a function of controlling access to the data, but also includes consideration of how electronic data can naturally degrade over time, depending on the medium in which it is stored. In this context, data integrity does NOT include the requirement for a high quality/accurate data initially; computer security can only preserve the integrity of what already exists in electronic form.

Data Management

Definition: A function of data administration which is responsible for data-related activities of the system life cycle, such as logical data modeling during requirements definition, database design, database management, the documentation of data-related decisions and products, and the disposition of the data at the end of the data's life cycle.

Data Management Plan (DMP)

Definition: A plan to document the data management strategy. It includes:

- A description of data integration/sharing supported by automated software tools for system and database development
- An organization-wide inventory or directory of the data collected

Data Map

Definition: A data map provides a graphical representation of data entities and the associations between them for detailed management and user review.

A data map and its data definitions directly support each other in a data model.

Data Model

Definition: Comprised of a data map and data definitions documented in an entity list. It provides feedback to users for identification of information requirements based on the strategic plan. It ensures precise implementation of data needed to support those information needs

Data Privacy/ Confidentiality

Definition: The need to protect the data from unauthorized disclosure, whether due to the Privacy Act of 1974, the Trade Secrets Acts, or some other policy.

Data Security

Definition: The protection of data against unauthorized disclosure, transfer, modification, or destruction, whether accidental or intentional.

Data Store

Definition: A data store is a repository of which users are aware and from which data may be read repeatedly and non-destructively. Thus, data stores are the permanent files and databases that presently support the enterprise.

Examples: Product database, customer information database and supplier database.

Database

Definitions:

- (1) A collection of interrelated data stored together with controlled redundancy to serve one or more systems or applications.
- (2) The software products that support the collection and storage of interrelated data to serve one or more systems or applications.

Database Access Permissions

Definition: The routine mechanisms within most database systems to allow different people different degrees of data access and data manipulation.

Database Protections

Definition: The routine procedures and mechanisms instituted to ensure that data is correct and is protected from computer hardware or software malfunctions. This includes:

- Data backups
- Data archiving
- Journaling

Database Administration

Definition: The technical design and management of the database; often falls within the jurisdiction of Data Administration

Decision Support Team

Definition: The Decision Support Team (DST), a subordinate working group of the IRB, is responsible for validating and scoring project information against standard investment rating criteria and submitting the results of their analyses to the IRB for selection, control, and evaluation decisions.

Deliverable

Definition: The output from a system development phase or activity. Some SDLC deliverables consist of a number of component deliverables produced in the life cycle activities.

Designated Security Officer

Role Definition: The Designated Security Officer (DSO) for the system is responsible for:

- Overseeing all security certification activities
- Preparing the Security Certification Statement
- The security of the application in the operational environment

Designer

Role Definition: The Designer is a person responsible for the development of the technical design of the application system.

Developer

Role Definition: The Developer is the author of the work products (e.g., the program code, specification, document, module, screen, and component) actually produced by the project.

Entity Type

Definition: An entity is a fundamental thing of relevance to the enterprise about which data may be kept. An entity type is the collection of entities that share a common definition. From another perspective, an entity is a single occurrence of an entity type.

Example: The entity type EMPLOYEE may describe the entities John Smith, Miles Standish, and David Fremp.

Entity types are refinements of subject areas. Often close inspection of a subject area will reveal that it is comprised of multiple entity types.

The names of entity types are always singular nouns.

Event

Object-Oriented Definition: Some occurrence that may cause the state of a system to change.

Event Diagram

Object-Oriented Definition: Event diagrams document the process of changing states (events) of an object. Event diagrams show the states of an object and how one acts on an object to move it to another event.

External Sources of Data

Definition: Data which comes into the automated information system from sources outside the United States Customs Service.

Example: Data submitted by importers through the Automated Commercial System (ACS)

Facilitator

Role Definition: The Facilitator, if available, is the person responsible for:

- Leading a review or meeting expeditiously and efficiently to a successful conclusion
- Facilitating one or more tasks of the planning process

Far-Term Timeframe

Definition: When evaluating a risk for the average project, this refers to six months or more.

Firmware

Definition: A program stored in read-only-memory (ROM) that controls the basic operation of the computer.

Function

Definition: A high-level grouping of work performed by an organization.

Functional Requirements

Definition: A precise description of the requirements of a computer system. It includes:

- A statement of inputs to be supplied by the user
- A description of the outputs desired by the user
- The algorithms involved in any computations desired by the user
- A description of physical constraints such as response time, and transaction volumes

General Support System

Definition: An interconnected set of information resources under the same direct management controls which share common functionality.

Government Off-the-Shelf (GOTS)

Definition: Software products developed by government agencies to meet standard (mostly administrative) needs. This software is currently being collected and distributed by the National Technical Information Service (NTIS).

Hardware

Definition: The physical equipment and electronic components in a computer

High Probability

Definition: When evaluating the likelihood of a risk occurrence, there is a good chance (e.g., 60% to 100%) that a condition/event will occur.

Imminent Timeframe

Definition: When evaluating risks for the average project, this refers to within one month.

Indicator

Definition: A measure or combination of measures that facilitates insight into a issue or concept. An indicator is produced by applying an analysis technique to the data, often comparing one or more measured values to expected values.

Information Collection Burden

Definition: The effort required to gather, process, or store information required to support some process.

Examples:

- Additional time spent by the user to enter the data
- Additional data storage requirements
- FOIA and Privacy Act considerations

Information Dissemination Controls

Definition: Controlling the distribution of information, specifically the data content.

Information Need

Definition: An information need is an unstructured statement describing a type of information required by an organizational unit to meet its objectives and support its functions.

Information Security

Definition: In total, information security involves the precautions taken to protect the confidentiality, integrity and availability of information. It encompasses three types of security:

- Applications Security
- Installation Security
- Personnel Security

Infrastructure

Definition: The underlying framework of an organization or system, including organizational structures, policies, standards, training, facilities and tools, that supports its ongoing performance.

Integration Testing

Definition: Ensures that all new or modified components of the system interact correctly with its interfacing systems.

Integrator

Role Definition: The Integrator is the person responsible for the set of activities that brings together all the sub-components and components of a system and ensures that requirements are satisfied and migration to the baseline is a smooth and planned operation. This includes the tasks involved in:

- Planning and facilitating all readiness and control gate reviews for quality and adherence to guidelines and standards
- Ensuring configuration management and change control is managed and impact assessments are performed
- Tracking critical path for project management and development
- Performing risk identification and mitigation on a programmatic as well as technical levels for a development effort

Interface

Definition: The connection between two components of a system.

For data administration purposes, we are concerned with:

- The data content of an interface during the analysis
- The behavior and packaging during the design phase

Indicator

Definition: An indicator is a measure or combination of measures, often represented by a graph or table, that provides insight into a particular software issue or concept. An indicator is produced by applying an analysis technique to the data, often comparing one or more measured values to expected values. (also see definitions of Issue, Measure, and Performance Measure.)

Examples: A large number of changes to requirements can be an indicator of future increases in effort and/or schedule slippage. Comparison of planned vs actual progress trends can indicate a potential cost overrun or quality slippage.

Information Systems Security Officer

Role Definition: The Information Systems Security Officer (ISSO) is responsible for reviewing the Security Certification Package and certifying that the application has been tested and found to meet all applicable Federal policies, regulations, and standards for securing information systems and the data that will be processed by them.

Note: The Customs ISSO is designated as the Director, AIS Security Division.

Investment Review Board (IRB)

Definition: The Investment Review Board (IRB) is the executive management team at Customs that makes funding decisions based upon comparisons and tradeoffs among competing project proposals.

Issue

Definition: An issue is anything that might affect the achievement of program/project objectives. Issues include risks, constraints, and any other project concerns. Identifying something as an issue does not mean that it is a problem; but rather that it might become a problem.

Examples of common software issues are project schedule and progress, resources and cost, growth and stability, and product quality.

IT Funding Request Worksheet (ITFRW)

Definition: The documents used by the decision support team and the IRB during the investment selection and funding allocation process for all projects in the IT investment management process.

Example: Customs IT Investment Management Process, August 1997

IT Portfolio

Definition: A collection of IT projects, including applications and other technical investments, that represents the mixture of projects that best meet the mission needs of the Customs Service.

Joint Application Development (JAD)

Definitions:

- (1) A team-based approach to analysis and decision-making. It is a joint venture between customers/users and information systems personnel, centering around a structured workshop, or JAD session.
- (2) A working meeting between functional users and application developers.

Line Item of Work

Definition: The lowest level of work appearing in the project plan. A line item of work could be a task or sub-task.

Logical Data Model

Definition: The logical data model is the fully defined conceptual data model, including each entity's attributes and relationships to other entities.

The logical data model provides a clear, precise and accurate definition of information requirements which physical database designers use to begin design of the data structure.

Low **Probability**

Definition: There is little chance (e.g., 0% to 30%) that an condition/event will occur when evaluating the probability (likelihood) of a risk's occurrence.

Major Application

Definition: An application that requires special attention to security due to the risk and magnitude of the harm resulting from the loss, misuse, or unauthorized access to or modification of the information in the application.

Marginal Impact

Definition: The potential cost or result of a risk that has minor impact and work can continue without major interruptions.

Measures

Definitions:

- (1) Measures are the dimensions, capacity, or quantity of a process or product.
- (2) A measure is a method of counting or otherwise quantifying some attribute of a software process or product.

Examples: Number of Problem Reports; Number of Design Discrepancies when compared with requirements; Number of Staff Hours spent by phase/task.

Medium Probability

Definition: There is some chance (e.g., 30% to 60%) that the conditions/event will occur when evaluating the probability (likelihood) of a risk's occurrence.

Messaging

Object-Oriented Definition: An operation that one object performs on another

Methodology

Definition: A structured approach for building information systems. It consists of steps taken to produce deliverables, which can be tested and measured. It can also be defined as a collection of methods, procedures, and standards that define synthesis of engineering approaches to the development of a product.

Milestone

Definition: A significant point in a project. A milestone has no duration, and represents the start of a portion of work, or the completion of a portion of work. One milestone may represent both the start and completion of significant portions of work. At the most detailed level, each task commences and ends with milestones.

Near-Term Timeframe

Definition: When evaluating a risk for the average project, this refers to between one month and six months.

Normalization

Definition: Normalization is the process of:

- Reducing a data entity to its most basic form
- Removing repeating data elements
- Using each data element for one and only one purpose
- Removing data elements not dependent upon the identifier of the entity
- Removing data elements dependent on the identifier of other entities

Object

Object-Oriented Definition: An item, concept or abstraction with crisp boundaries that makes sense in an application context. All objects have identity and are distinguishable.

Object Librarian

Object-Oriented Role Definition: The individual on an object-oriented project who has been assigned responsibility for controlling and managing the object library.

Object Model Document

Object-Oriented Definition: This document describes the object model and the data associated with the object model.

On-going Costs

Definition: Those costs which can reasonably be expected to recur on a regular basis during a product's life cycle.

Operation

Object-Oriented Definition: Some work that one object performs upon another in order to elicit some reaction. The terms message, method, and operation are usually interchangeable.

Peer Review

Definition: A review of a software work product, following defined procedures, by peers of the producers of the product for the purpose of identifying defects and improvements

Performance Measure

Definitions:

- (1) A performance measure is an indicator that shows the progress of an action against the plan. It indicates the extent to which the goal it measures has been reached. (Also see definitions for Measure and Indicator.)
- (2) As applied to information systems, performance measurement refers to the validation of the responsiveness of the configuration of equipment and software to the needs of users and the availability and reliability of individual components and the system as a whole.

Each performance measure monitors a specific goal or objective and may be influenced by other critical success factors.

Phase

Definition: A group of related tasks on a project, grouped at an intermediate level of detail in the work breakdown structure. The division of a project into phases is governed by the SDLC model.

Physical Database Protection

Definition: Refers to safety from events like fire, terrorists, and "Acts of God". It implies the presence of guards, locked rooms, smoke detectors, fire alarms, and closed circuit electronic surveillance.

Policy

Definition: A guiding principle, typically established by Senior Management, that is adopted by an organization or project to influence and determine decisions.

Procedure

Definition: A written description of a course of action to be taken to perform a given task. Describes the "how-to" or "step-by-step" instructions that implement a process in order to obtain a specified outcome.

Procedure Map Definition: A procedure map provides a graphical representation of procedural logic and business conditions to be satisfied. It provides feedback to users for identification of their processing needs.

> A procedure map and its process definitions directly support each other in a procedure model.

Procedure Model

Definition: A procedure model can be derived from a data model. It comprises a procedure map and processing definitions in a procedure list. It documents the logic required to process the data represented by the data model.

Process

Definition: A sequence of activities, steps, events, or phases performed over time for a given purpose. Describes "what happens" over time within the organization or project in order to build products that meet the standards and requirements in accordance with Customs policies.

Program Specifications

Definition: A precise description of the requirements of an individual program; it includes a statement of the inputs to be supplied to the program, the outputs desired, the algorithms involved in any computations, and a description of such physical constraints as execution speed, and memory limitations.

Project Definitions:

- (1) A project is a group of tasks performed in a definable time period in order to meet a specific set of objectives. A project has a beginning and an end, an objective, a leader and a team, and a plan.
- (2) An IT Project is any set of tasks focused on developing and/or maintaining a specific IT product, which may include hardware, software, and other components. Work products typically are organized for the collection, processing, maintenance, transmission and dissemination of information.

Project Librarian

Role Definition: The Project Librarian is the person responsible for:

- Collecting programs and packages that are made available for common use within the development environment
- Updating the project library and/or automated repository with the project documentation and programs

Project Manager

Role Definition: The Project Manager is the person who:

- Has the responsibility and authority for meeting the project objectives
- Manages the day-to-day workings of the initiation, management, and development teams
- Coordinates with the Business Sponsor and Senior Management

Project Plan

Definition: A management document describing the approach that will be taken for a project. The plan typically describes the work to be done, resources required, the methods to be used, and the schedules to be met. (Also known as a Software Development Plan in certain cases.)

Project Planner Role Definition: The Project Planner is a member of the project responsible for the planning of the project. The Project Planner is responsible for:

- Transitioning from the Project Initiation Phase to the Project Definition Phase
- The development and maintenance of planning documents and schedules as required during the project's life cycle

Project QA Manager

Role Definition: The Project Quality Assurance (QA) Manager is responsible for the formal monitoring of various work products of the project to ensure that standards, policies and regulations are being met. This project person/group is also responsible for monitoring the compliance and effectiveness of the processes being used.

Project-Specific Issue

Definition: Anything that might affect the achievement of project objectives. Issues include risks, constraints, and any other concerns which can impact the success of the project. Identifying something as an issue does not mean that it is a problem, but rather that it might become a problem.

Examples:

- Requirements/project growth and stability
- Aggressive or unrealistic organizational goals
- Product quality
- Computer hardware resource utilization or performance

Project Status Meetings

Definition: Project status meetings are project management reviews that are held at the management level that is <u>directly responsible</u> for the day-to-day detailed results of the project.

Project Team

Definition: The staff of the project consisting of the Project Manager, the Team Leaders, and the personnel assigned to perform the tasks.

Project Tracking

Definition: The process of monitoring to ensure that the project meets the cost, time, and quality objectives that are identified in the planning phases.

Prototype

Definition: Prototyping is a technique for building a model of an application or parts of an application that allows users and developers to:

- Visualize or define the system
- Refine the system in an iterative fashion
- Reach concurrence on the requirements and interfaces
- Simulate program and process flow
- Provide modifiable code for evolving into the production model

Prototyping is a tool used within the framework of a life cycle; a prototype is the model produced using this technique.

Quality

Definitions:

- (1) The degree to which a system, component, or process meets specified requirements.
- (2) The degree to which a system, component, or process meets customer or user needs or expectations.

Quality Assurance

Definitions:

- (1) The management of defined activities that are in place throughout the life cycle to ensure that user requirements are met, processes are documented and followed, products are compliant with standards, and interim deliverables are fit for use.
- (2) All the actions necessary to ensure the quality of the:
 - Work products and their documentation (both deliverable and associated non-deliverable products)
 - Processes used to produce the work products

Rapid Application Development (RAD)

Definition: RAD is a calendar-driven approach to development that imposes limits on the time available for specifying requirements, building prototypes, and constructing applications.

Relationship

Definition: A relationship is a reason relevant to the enterprise for associating two entities from one or two entity types.

Example:

- Entity type = Customer
- Entity type = Order
- Relationship = *places*

Thus, CUSTOMER places ORDER.

Requirements Analysis Package

Definition: A document that defines the problem with the existing system or operations and proposes the most efficient solution to the problem. It is presented to management as the justification to fund the project.

Requirements, New

Definition: Additional requirements discovered after the requirements have been baselined and certified.

Requirements, Changed

Definition: Modifications and enhancements to baselined requirements as identified by prototyping, reviews, user-generated updates (including those mandated by law), and team-generated corrections.

Risk Definitions:

(1) Risk is a potential loss to Customs. This may involve unauthorized disclosure, unauthorized data modification, and/or the loss of information resources. Risk can also occur from authorized but improper use of computer resources.

Risk (continued) (2)

Project risks are risks that can potentially impact a project's cost, schedule, or product quality in a negative manner. Plans can be made to track and mitigate identified risks so that they do not develop into unexpected problems.

Risk Analysis

Definition: The process of identifying project and security risks, determining their magnitude, and identifying areas needing safeguards. In other words, it is an analysis of an organization's information resources, its existing controls, and its remaining organizational and AIS vulnerabilities.

Risk Manager

Role Definition: The Risk Manager is the person designated by the Project Manager to review, prioritize, track, and document risks based on the evaluations and mitigation strategies suggested by the Project Management Team. Other possible role titles on a project for this function are Risk Coordinator or Risk Administrator.

Risk Taxonomy

Definition: When applied to risks, a taxonomy is a structured method of grouping risks into related groups, based on either source of risk or possible mitigation strategies.

Security

Definition: The set of laws, rules, and practices that regulate how an organization manages, protects, and distributes sensitive information.

Security Accreditation

Definition: The official management authorization for operation of an AIS. It provides a formal declaration by an Accrediting Authority that a computer system is approved to operate in a particular security mode using a prescribed set of safeguards.

Security Certification

Definition: A formal statement by the Assistant Commissioner, Office of Information and Technology and the Process Owner stating that a specific application or facility has met all requirements necessary to provide data integrity, availability, and confidentiality.

NOTE: The certification is made prior to Implementation or Transition. by them.

Security Controls

Definition: Physical, environmental, hardware, software, communications, administrative or procedural measure in place to restrict access or prevent the unauthorized destruction, damage, disclosure or denial of use of AIS resources.

Security Features

Definition: A guideline that describes the security features provided by the system, how to use them, and how they interact with one another.

Security Plan

Definition: A plan started in the Definition Phase, and updated during the entire life cycle, that ensures development and implementation of security measures for the system under development.

Security Requirements

Definition: Types and levels of protection necessary for equipment, data, information, applications, and facilities to meet security policies.

Security Testing

Definition: Security testing is performed in the operational/production environment. Security testing:

- Evaluates compliance with security and data integrity guidelines, and it addresses security backup, recovery and audit trails
- Ensures that all security measures have been properly implemented in the operating environment and are effective, to satisfy security requirements
- Addresses all aspects of security to include internal controls, physical and environmental security, and administrative procedural security requirements

Senior Management

Role Definition: For a particular project, senior management is the functional role <u>above</u> that of the Project Manager who is responsible for the day-to-day activities and results of the project. Senior management's primary focus is on the long-term vitality and needs of the organization, rather than short-term project and contractual concerns.

Sensitive Information

Definition: A category of unclassified Government controlled information

Reference: Automated Information Systems Security Policy Handbook, CIS HB 1400-05, June 1996.

Software

Definition: The programs, languages, and/or routines that control the operations of a computer in solving a given problem.

Stakeholder, External

Role Definition: External stakeholders are users <u>outside</u> of the United States Customs Service who depend on Customs data collection and data processing for all or part of their business activities. These include, but are not necessarily limited to:

- The Trade Community (i.e., importers and exporters)
- Other Federal Agencies

Stakeholder, Internal

Role Definition: Internal Stakeholder(s) are the individuals who work in a functional area <u>within</u> the United States Customs Service and depend on a specific system for all or part of their mission-critical activities.

Standards

Definition: Specifications with which a product or service must comply; standards provide evaluative measures for acceptance.

Strategic Decisions

Definition: A central mechanism that has sweeping implications for an entire system.

Strategy

Definition: The means by which an objective is achieved. Each objective must be supported by a strategy.

String Testing

Definition: Determinations and/or validations necessary to ensure unit or component correctness when working with other units or components, such as called subroutines.

Subject Area

IE Definition: A subject area is an area of interest to the enterprise centered on a major resource, product, or activity. It summarized things in which the enterprise is interested. As such, it is a rather imprecise description that generally requires further refinement.

The names of subject areas are usually plural nouns.

Examples:

- Vendors
- Customers
- Raw Material

Support Organization Representative

Role Definition: The Support Organization Representative is the person representing an OIT Support Organization to a project with the authority to make decisions and agreements on its behalf.

System

Definition: A collection of components organized to accomplish a specific function or set of functions.

System Design

Definition: The system design consists of a more detailed description of the data needs and how the system will work. It includes:

- A description of the technical approach and security features used for the target architecture
- An identification of all programs and other software components associated with a particular application and illustrates how these programs interact with other applications and specific database(s).

Reference: Volume II, Chapter 16, Section B, Programming Documents

System Testing

Definition: Testing to determine whether all elements of the system interface properly and satisfy overall system function and performance objectives.

Tailoring

Definitions:

(1) Some off-the-shelf (COTS) products have specified areas where users may enter their own information, templates, or data, without altering the source code or functionality of the product.

This tailoring is usually upwardly and downwardly compatible with other releases of the same product and does not necessarily need to be repeated with each release.

See also "Customization".

(2) Modifying a process or document format for use on a particular project. Processes and documents are scalable, but certain minimum information must be maintained.

Reference: Volume I, Chapter 1, Section C, Tailoring Guidelines

Task

Definition: A well-defined unit of work for one or more persons on a project. A task should have a measurable end. It is commonly used to describe a significant activity which is decomposed to another level.

Team

Definition: A collection of people, often drawn from diverse but related groups, assigned to perform a well-defined function for an organization or a project.

Team Leader

Role Definition: The Team Leader is the person responsible for leading a collection of people, often drawn from diverse but related groups, assigned to perform the specific tasks of the project.

Technical Review Board

Definition: The Technical Review Board (TRB) is composed of members of the Technical Architecture Group (TAG) and other experts in technical and functional subjects who assist the DST by conducting the Technical Risk Reviews for all IT projects, including those below the formal IRB review threshold.

Technical Writer

Role Definition: The Technical Writer, if available, is the person responsible for documenting the computer system being built or purchased and integrated.

Tester

Role Definition: The Tester is the person responsible for testing and verifying that the application system functions, as defined by the application requirements and design documentation, perform as expected.

Test Plan

Definition: A formal specification that guides the conduct of a test.

Test Script

Definitions:

- (1) The detailed, complete specification of all aspects of a test including test initialization, data structures, keystrokes, other inputs, expected outcomes and validation criteria.
- (2) A collection of tests, usually with a common purpose and usually run as a group.

Total Quality Management (TQM)

Definition: The management of changes made to AIS hardware, software, firmware, documentation, tests, test fixtures, test documentation, communications interfaces, operating procedures, installation structures, and all changes thereto throughout the development and operational life-cycle of the AIS.

Trainer

Role Definition: The Trainer, if needed, trains the users and develops the initial Training Requirements.

Trigger

Object-Oriented Definition: An action that causes an operation to change.

Manual

Trusted Facility Definition: This manual presents cautions about functions/privileges that should be controlled when running a secure facility and procedures for examining and maintaining audit trails (including the audit trail record structure).

Unit Testing

Definitions:

- (1) The procedures used to verify the code or changes to the code within a particular module or subroutine.
- (2) The lowest level of testing that can be done on a code module or unit.

Up-Front Costs

Definition: Those cost items which occur at the beginning of a product's life cycle within the Customs environment.

Use Case

Definition: A named region of a system's behavior; a given use case denotes some function or business process.

Object-Oriented Definition: A special sequence of transactions in a dialog between a user and the system. A given use case denotes some function or business process.

User

Role Definition: The User is an individual or office for whom the system is being developed and who provides the business needs to the Business Sponsor to complete the user requirements document.

User Knowledge

Definition: Knowledge about the business purpose and rules of a system.

Validation

Definition: The process of evaluating software at the end of the software development process to ensure compliance with software requirements.

Verification

Definition: The process of determining whether or not the products of a given phase of the software development cycle fulfill the requirements. The act of reviewing, inspecting, testing, checking, auditing or documenting whether or not items, processes, or documents conform to specified requirements.

Vulnerability

Definition: A weakness in a telecommunications system, automated information system, or cryptographic system, or security procedures, hardware design, internal controls, etc., that could be exploited to gain unauthorized access to sensitive information.

Walkthrough

Definition: A highly-structured meeting to review the completeness and quality of selected module(s) of the system, or of the entire system.

Work Breakdown Structure (WBS)

Definition: A key ingredient in the integrated project plan. It is a logical, hierarchical list of tasks for the project, consisting of various levels of detail which may include phases and steps as intermediate levels. Work breakdown structures are usually drawn with the top block representing the project objectives and the lowest level representing the tasks.

The work breakdown subdivides the project into tasks that are each defined, estimated, and tracked.

Work Product

Definition: Any final or intermediate product, service, or result of a process or activity. This includes software code, documentation, and systems.

